

We claim:

1. A mount assembly comprising:
  - a mount;
  - a motor movably attached to the mount;
  - a color wheel fixedly attached to the motor, the color wheel having a spiral color filter with a filter edge;
  - a light integrator rod having an input face and an output face proximate to the color wheel; and
  - an alignment mechanism configured to move the motor with respect to the light integrator rod in a first direction and in a second direction to align the filter edge with respect to the output face of the light integrator rod.
2. The mount assembly of claim 1 wherein the filter edge is aligned to be tangential to the central axis of the light integrator rod.
3. The mount assembly of claim 1 wherein the filter edge is aligned so that the filter edge is tangential to an edge of the output face at a center of the edge.
4. The mount assembly of claim 1 wherein the alignment mechanism includes a sliding plate and a reduction ramp, the sliding plate moving along the reduction ramp a first distance in the first direction to move the motor a second distance in the second direction, the first distance being greater than the second direction.
5. The mount assembly of claim 1 wherein the alignment mechanism includes a tab on a back plate of the motor, the alignment tab cooperating with a tapered end of an alignment screw to move the motor with respect to the integrator rod when the alignment screw is extended.
6. The mount assembly of claim 1 wherein the alignment mechanism is configured to provide at least 1.5 mm of travel in the first direction with an alignment accuracy of at least 0.01 mm, and to provide at least 1.5 mm of travel in the second direction with an

alignment accuracy of at least 0.01 mm, wherein the first direction is orthogonal to the second direction.

7. The mount assembly of claim 1 further comprising an aperture plate attached to the input face of the integrator rod, the aperture plate supporting the integrator rod in the mount assembly in a cantilever fashion from the aperture plate.

8. The mount assembly of claim 7 further comprising a cover extending along the integrator rod, the aperture plate sealing an input end of the cover from dust intrusion.

9. The mount assembly of claim 8 further comprising a plurality of alignment rods extending through the cover to contact the light integrator rod.

10. The mount assembly of claim 9 wherein the plurality of alignment rods contact the light integrator rod less than half-way from the input face to the output face, an unsupported portion of the light integrator rod extending from the plurality of alignment rods toward the output face.

11. The mount assembly of claim 9 wherein at least one of the plurality of alignment rods has an end shaped to provide a line contact with a wall of the light integrator rod.

12. The mount assembly of claim 11 wherein the end is countersunk.

13. The mount assembly of claim 7 further comprising a plate attached to the output face of the integrator rod, the integrator rod being supported by the plate and by the aperture plate.

14. The mount assembly of claim 1 further comprising a plate attached to the output face of the integrator rod, the plate supporting the integrator rod in the mount assembly in a cantilever fashion from the plate.

15. The mount assembly of claim 7 further comprising a cone extending from the input end of the aperture plate.
16. The mount assembly of claim 15 wherein the cone has a cone angle selected according to an angle of light from a lamp.
17. The mount assembly of claim 15 further comprising a filter attached to the cone to keep dust from landing on the aperture plate.
18. The mount assembly of claim 17 wherein the filter comprises at least one of an infrared filter and an ultraviolet filter.
19. A mount assembly comprising:
  - a mount;
  - a motor;
  - a color wheel fixedly attached to the motor, the color wheel having a spiral color filter with a filter edge;
  - a light integrator rod having an input face and an output face proximate to the color wheel;
  - a cover extending along the integrator rod from the input face toward the output face; and
  - a plate attached to the input face of the light integrator rod supporting the light integrator rod in a cantilever fashion within the cover and sealing a first end of the cover from dust intrusion.
20. The mount assembly of claim 19 wherein the plate is an aperture plate.
21. The mount assembly of claim 19 wherein the motor is movably attached to the mount and further comprising an alignment mechanism configured to move the motor with respect to the light integrator rod along a first direction and a second direction to align the filter edge with respect to the output face of the light integrator rod.

22. The mount assembly of claim 19 further comprising a cone extending from the input face away from the light integrator rod, the cone having a cone angle selected to shadow the motor from light from a lamp.
23. The mount assembly of claim 19 further comprising a cone extending from the input face away from the light integrator rod and a filter attached to a wide end of the cone.
24. A method of aligning a scrolling color light system comprising:
  - adjustably attaching a motor mount having a motor with a scrolling color wheel to a light integrator mount supporting a light rod;
  - aligning the light rod to an optical axis of a light source; and
  - aligning an output face of the light rod to the scrolling color wheel without changing the alignment of the light rod with respect to the optical axis of the light source.
25. The method of claim 24 further comprising steps of:
  - aligning a timing light sensor to a timing mark on the scrolling color wheel; and
  - securing the timing light sensor to the motor mount.
26. The method of claim 25 wherein the step of aligning the timing light sensor occurs before the step of aligning the output face.